

Doyle &
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Landscape
Architecture

Landscape Design Report

Residential Development, Blackrock Avenue, Eden, Blackrock, Cork



Project: Ref 24-032

Client: JOHN SISK & SON (HOLDINGS) LTD.

Date: 24/06/2026

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Landscape Design Report

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1.0 Introduction

This Landscape Design Report has been prepared for the proposed residential development (LRD) on lands at Blackrock Avenue, Eden, Blackrock, Cork. The report has been prepared by Doyle + O'Troithigh Landscape Architecture Ltd. on behalf of John Sisk and Son (Holdings) Ltd.

2.0 Vision for the Landscape

The lands are located on Blackrock Avenue, off Skehard Road in the south-east suburbs of Cork City. It is located to the south of Eden Hall residential scheme which is currently under construction, to the west of Blackrock Hall (a 4-storey mixed used neighbourhood centre), to the east of Passage Railway Greenway and to the north of an open space with a raised walking connecting to the aforementioned greenway.

The site, is currently an open green undulating green field, which appears to be traversed by pedestrians at localised points, which rises from the south-east to north west. It is relatively open in nature with a number of sporadic hawthorn trees within. The space is edged by a sloped embankment comprising of tree and naturalise understorey planting to the south where it forms the edge of a raised walkway. To the west, railings and a low rise planted buffer are present which demarcate the edge of the pedestrian connection to the Passage Railway Greenway. To the east a line of establishing Lime trees edge the site along Blackrock Road.

The application in this instance comprises *'of the construction of 114 no. residential apartment units (consisting of a mix of 1-bed and 2-bed units) arranged in 2 no. apartment blocks, which varies in height from three to five storeys over ground floor, together with all associated site development works.*

The development includes the provision of 56 no. car parking spaces and 231 secure bicycle parking spaces (including secure internal storage), private amenity spaces in the form of balconies and patios for each apartment. Additionally, it includes about 697.8 sq.m of communal open spaces and a centrally located public open space of approximately 1,701.5 sq.m. Ancillary works involve bin storage facilities, internal circulation routes, boundary treatments, public lighting, landscaping, and all relevant services infrastructure.

Site development works include providing vehicular and pedestrian access from Blackrock Avenue, along with a direct pedestrian connection to the Mahon Boreen Pathway, and all related localised road, footpath, and public realm works needed to support the proposed development.'

The landscape proposal has been developed with an emphasis on a sustainable approach and a responsiveness to climate change; including sustainable urban drainage and native planting where appropriate, to collectively encourage a weather resilient, biodiverse and robust scheme.

The proposal features a strong emphasis on permeability designed for pedestrian connectivity which interact with landscape amenity areas and existing services, offering engagement and protection to the Passage Railway Greenway and incorporating landscape mitigation features. The protection and

development of this new landscape is central to ensure the long-term successful establishment of this residential scheme at Blackrock Avenue.

The landscape package includes the following suite of drawings:

Drawing Name	Drawing No.	Size	Rev
Landscape Plan	LP-01-PP	A1	0
Landscape Plan with Services	LP-02-PP	A1	0
Planting Plan	PP-01-PP	A1	0
Boundary Plan	BP-01-PP	A1	0
Landscape Details	LD-01-PP	A1	0

3.0 Landscape Tools

The design and layout of the public realm is essential in the creation of an appealing built environment for the scheme. It has been designed to offer unique character areas and sense of place with the use of a comprehensive set of cohesive and complimentary external hard and soft landscape finishes. Refer to Fig. 3.0 below for reference.

The use and mix of trees, shrubs and herbaceous plants have been considered in detail in order to be robust enough to establish, whilst still offering seasonal interest, movement and a focussed expression.

Native plant material has been considered, where appropriate, to improve the overall biodiversity of the site. Pollinator species have also been included which would be in line with the 'All-Ireland Pollinator Plan 2021-2025'. The Plan is a *'new five-year road map that aims to help bees, other pollinating insects and our wider biodiversity. It is about encouraging a better way of managing our whole landscape to permanently support our struggling biodiversity'*.



Fig 1.0 – Typical palette of external hard and soft materials

Bio-retention tree pits and rain gardens are included within scheme to support the surface water management and sustainable urban drainage strategy developed specifically for the site. The plant species within these ‘softscape’ features have been selected to ensure resilience; and that planting establishes well and offers variety throughout the seasons.

It is proposed that much of the appropriate ornamental shrubs are under-planted with bulb species to offer ‘flurries’ of colour from early to late spring. Leaf colour, bark tone and berries shall all be considered for the scheme which allows for good contrast and again, seasonal variation. Within the amenity grass areas, the planting of large swathes of bulbs through the open space areas will provide colour in early mid and late spring. This will reduce the grass cutting maintenance for a period of time when bulb planting is developing right through to senescence. This reduced mowing regime would also be encouraged under the previously referenced All-Ireland Pollinator Plan 2021-2025.

The landscape is designed to be comfortable, passively supervised, accessible, welcoming, sheltered and safe. The passive and active recreation open space areas will provide a high level of visual amenity while allowing for a seamless connection between this development and adjoining amenities.

The provision of a permeable landscape; offering users with opportunity and visual variety and interest throughout the scheme is one of the core principals of the design.

Second to the core principle of design is the development of a palette of materials for hard and soft landscaping for the amenity areas and the streetscape.

We have developed a check list of both hard and soft landscape materials. Hard works materials must;

- Allow for ease of movement for all users
- Be sustainable
- Enhance the space and not conflict with the building finishes
- Work and look attractive in both wet and dry conditions
- Have a long timeline appeal

Soft works plant materials must;

- Be suitable for the Irish climate; and native where appropriate
- Be non-invasive
- Collectively provide visual interest all year round
- Enhance bio-diversity and habitat creation
- Be disease resistant

By approaching the overall landscape design of the scheme at both macro and micro levels, the proposal will provide a high level of amenity.

4.0 Landscape Proposals and Green Infrastructure

A selection of site images have been included below in Fig. 2.0 to 5.0 inclusive.



Fig. 2.0 – View in the south-western edge of the application site noting the naturalised embankment to the south and the presence of railings on a localised embankment associated with the Passage Railway Greenway.



Fig. 4.0 – View north-eastwards from the Passage Railway Greenway 'slip' link with Eden Hall (under construction in the background)



Fig. 3.0 – View eastwards along the southern site boundary; with Blackrock Hall to the east.



Fig. 5.0 – View along eastern edge of the scheme along Blackrock Road.

Ecological compensatory measures are proposed as part of the scheme including:

- A. The **planting of native species**, where appropriate
- B. Planting of new **native hedgerows** as well as the inclusion of an appropriate herb-layer along its extent where possible
- C. Planting of **semi-mature trees**, with many flowering varieties which are beneficial for pollinators. Refer to planting schedule PP-01-PP provided for typical reference.
- D. Inclusion of a select number of **bio-retention tree pits and rain gardens** and where appropriate; all of which have been coordinated with the drainage engineer.
- E. Planting **diverse grass mixes**, including **naturalised bulb planting** and potentially managing key grass areas zones as meadows within the proposed green open spaces where appropriate.

The key objectives of the landscape proposals specific to this development are noted as follows:

- To provide a landscape scheme which delivers a high level of visual amenity and passive recreation for the residents all year round.
- To engage in the form of delivering a linking pedestrian access to the Passage Railway Greenway.
- To successfully address the topographical and underground services challenges of the site.
- To create an attractive, high-quality landscape for the residents and their quality of life. Well-designed landscapes, especially in neighbourhoods contribute to an overall sense of well-being by providing places for people to meet for a walk, for collaboration or just to chat. People places are successful places.
- To ensure that the plant material proposed is suitable in terms of scale, species selection, on-going maintenance and overall longevity.
- To adopt a repetition and rhythm of plant species to ensure a cohesive style and an overall consistency.
- To cater for envisaged maintenance measures.

5.0 Open Space Proposals

The location and positioning of all open spaces have been considered in detail to create characterful amenity zones for the new community; unlocking permeability to the wider green network where possible. As noted in the Landscape Plan provided within this application (namely drawing no. LP-01-PP); the open space amenity for both public and communal is focussed predominantly along the western edge of the site.

This siting of the open space is positive in terms of its aspect, its connection to the 'slip pedestrian link' to the Passage Railway Greenway and the proposed built development offering passive surveillance. The design stage revealed opportunities for pedestrian linkages to the existing mixed development at Blackrock Hall as well as unlocking potential to link to the Passage Railway Greenway; a successful off-road link accessing wider connection.

As a general note, the following key elements have been considered as part of the open space detailed design, protection of the site's peripheral green infrastructure as well as supplementary planting to provide additional green infrastructure within the site.

- Considered path links for site wide permeability and beyond to Passage Railway Greenway and the built development and retail/services to the east.
- SuDS measures including bioretention tree pits and rain gardens
- Structural tree planting and meadow grass mixes with a diverse seed range
- The development of 'herb layer' to the base of proposed native hedgerows to reinforce green infrastructure where appropriate.
- Naturalised bulb planting
- Informal kick-about or multifunctional space along the western edge
- A variety of seating zones with good aspect and direct views to multifunctional play spaces.
- Opportunity for active and passive recreation

Formalised communal open spaces has also been incorporated along the western edge and south-western edge which are defined by a railing and gated arrangement with hedging and associated shrub planting. Formal play is also captured within these spaces along with seating nodes taking advantage of good aspect and views across the space.

The eastern and norther edge of the scheme will feature the internal access road and parking arrangements which will receive specimen trees, suited to streetscape development; where possible. A strong focussed pedestrian link will traverse the site in an east-west direction through the built development; offering a strong connection to Blackrock Hall via a new pedestrian crossing and to the Passage Railway Greenway. Size, seasonal interest, colour and variation have all been considered in choosing specific trees for these locations. Supporting shrub and clipped hedge planting within this space and along the boundary edge will ensure an overall unified approach is adopted.

6.0 Planting Programme

Planting on site will commence with the completion of each stage of the works and as a result the programme is closely tied to construction operations. Ground preparation will precede planting and will include weed clearance and soil amelioration where necessary.

Planting will largely be carried out during the dormant period from November – March, with grass seeding carried out from April – September.

A 12 months defects liability and landscape maintenance period will be set in place for all plant material with plant failures being replaced in the following planting season.

Plant materials selected for this residential scheme will largely follow the planting plans provided within the application. The following landscape specification as outlined below shall be adopted in accordance with best practice.

Refer to Appendix A for General Landscape Specification & Maintenance

Appendix A: General Landscape Specification & Maintenance

1.0 Standards of Workmanship and Materials

The Contractor shall satisfy the Employer's Representative that all works have been carried out to comply with BS 4428:1989 (General Landscape Operations) and BS 3936-1:1992 (Nursery Stock).

It is essential that the site is tidy at all times and that the planting appears healthy. The Contractor should be prepared, at all times, to ensure that such conditions are met, and should include for this in his rates.

Any material not meeting the specifications or qualifying for the approval of the Employer's Representative, for whatever cause, shall be rejected.

The Contractor shall familiarize himself with the layout of services and the positions of all structures on the site and shall be liable for any damage to the above.

1.2 Work by Machine or Hand

All operations hereinafter described will be carried out by suitable approved machines or by hand. Any work around the bases of existing trees, saplings, footpath edges, manhole covers, underground services etc. which cannot be carried out by machine for any reason shall be executed by hand and the Contractor must include for this in his rates.

1.3 Unsuitable Weather

Excavation, filling, cultivation, planting and other works will be suspended in wet weather and when conditions are unsuitable and the Contractor shall allow in his prices for such eventualities.

1.4 Planting

"Suitable weather conditions" for planting will mean open weather (i.e. mild, dull and moist even in winter). Planting operations will be suspended in periods of drought, when soil is frost-bound or water-logged and in periods of persistent drying cold winds. The Employer's Representative reserves the right to halt the works should the Employer's Representative consider the working conditions or the weather unsuitable.

1.5 Planting Season

The planting season has been addressed as part of the program of works scheduled in item 4.0. Containerised plants may be planted throughout the year provided the weather is considered suitable, the soil is sufficiently moist and each plant is watered following planting.

Planting outside the specified planting period will only be permitted in exceptional circumstances at the discretion of the Employer's Representative; such exceptional circumstance shall include unsuitable weather and no penalty shall be incurred under the heading of liquidated damages provided that any delay is formally accepted by the Employer's Representative as attributable to this cause. In the event that works are delayed by inclement weather, the Contractor shall complete them at the earliest opportunity afforded by suitable weather conditions.

1.6 Approved Chemicals

All chemicals used will be non-toxic to human beings, birds and animals under normal use. No chemicals will be used for any purpose without the prior approval of the Employer's Representative. The Contractor will submit a list of all chemicals to be used to carry out the contract prior to commencement.

1.7 Planting Generally

The Contractor shall be responsible for setting out all areas of planting to the satisfaction of the Employer's Representative.

1.8 Notice of Intentions

The Contractor will give 48 hours notice to the Employer's Representative of his intention to commence any of the following operations: tree and shrub removal, setting out, planting, fertilising, herbicide application and maintenance visits. Alternative notification requirements may be stated relating to specific items and these over-rule this general requirement.

PREPARATORY WORKS

1.9 Litter, Debris Removal

All litter, debris and clippings, are to be removed from the entire area of the site before planting operations begin. No burning shall be allowed on site.

1.10 Planting Areas

The Contractor shall clearly mark boundaries of all planting areas and obtain approval of setting out by the Employer's Representative before commencing work.

1.11 Weed Removal

In areas to be ripped all aggressive perennial weeds, dock, thistles and nettles are to be eliminated from the site.

In areas where existing grass is to be removed and the soil cultivated a combined contact/translocated herbicide is to be applied to remove all grass and weeds.

1.12 Surface cultivation

Surface cultivation will consist of rotovating the topsoil to a minimum depth of 450 mm over shrub areas, care to be taken to ensure that the subsoil is not brought to the surface. It shall then be worked to reduce the topsoil to a fine tilth. Works within the planting beds will require hand working and the contractor shall include this in his price.

After cultivation, all debris, perennial weeds and stones over 25mm in any dimension are to be removed off site.

Final grading is to be carried out to ensure the true specified level and slope and to avoid minor ridges, dishing or other depressions where water may collect.

Unless otherwise stated, finished levels of shrub planting areas will be 50mm above adjoining paving or kerbs, retaining wall copings, manhole covers etc. and levels will be arranged to give gentle falls for drainage and to avoid ponding hollows.

Any area unduly compacted during the work of grading will be loosened by forking. The use of heavy rollers to roll out mounds will not be permitted.

Landscape Specification Softworks

2.1 Plants generally

All trees, hedging, specimen shrubs, shrubs, ground cover planting and bulbs, shall conform fully to the specification in respect of species, size and quality. The Contractor shall name the supplier in his tender for approval by the Employer's Representative. All plants shall be well grown, sturdy and bushy according to type and free from all diseases and defects. Shrubs shall be container grown, rootballed or bare rooted as stated in the plant schedules. If container grown, root growth shall not have been restricted by the containers. The Employer's Representative reserves the right to reject any plant material (not previously approved) before or after planting if it does not conform to the specification. All plant material which does not conform to the specification will be automatically rejected and must be removed from site and replaced at the Contractors' expense.

2.2 Materials

All plant material shall be good quality nursery stock, free from fungal, bacterial or viral infection. Aphids, Red Spider or other insect pest, and physical damage. It shall comply with the requirements of the following sections of B.S. 3936-1, Specification for Nursery Stock, where applicable:

Part 1:	1992:	Trees and Shrubs.
Part 2:	1990:	Roses.
Part 10:	1981:	Groundcover plants.
Part 9:	1992:	Bulbs, corms and Tubers

All plants shall have been nursery grown in accordance with good practice and shall be supplied through the normal channels of the wholesale nursery trade. They shall have the habit of growth that is normal for the species.

Except for any cultivated varieties or exotic species which do not set viable seed in Ireland, all plants shall have been grown from seed.

The Contractor will be deemed to have advised his suppliers of the relevant sections of this specification, including all protection required, at the time of enquiry and shall in all cases be liable to replace materials brought on site which are not in accordance with this specification.

2.3 Species

All plants supplied shall be exactly true to name as shown in the plant schedules. Unless stipulated, varieties with variegated or otherwise coloured leaves will not be accepted, and any plant found to be of this type upon leafing out shall be replaced by the Contractor at his own expense.

Bundles of plants shall be marked in conformity with the relevant part of B.S. 3936-1. The Contractor shall replace any plants which are found not to conform to the labels.

2.4 Plants/Trees - General

Condition: Materially undamaged, sturdy, healthy and vigorous.

Appearance: Of good shape without elongated shoots.

Hardiness: Grown in a suitable environment and hardened off.

Health: Free from pests, diseases, discoloration, weeds and physiological disorders.

Budded or grafted plants: Bottom worked.

Root system and condition: Balanced with branch system.

BS Standard: The relevant sections of BS 3936.

Species: True to name.

2.5 Container Grown Trees/Rootballed Trees/Shrubs

Growing medium: With adequate nutrients for plants to thrive until permanently planted.

Plants: Centered in containers, firmed and well watered.

Root growth: Substantially filling containers, but not root bound, and in a condition conducive to successful transplanting.

Hardiness: Grown in the open for at least two months before being supplied.

Containers: With holes adequate for drainage when placed on any substrate commonly used under irrigation systems.

2.6 Certification

The Contractor will provide a certificate to the effect that all plant materials are fully in accordance with the specification and with BS 3936. All trees shall have a Certificate of Provenance Declaration Form and the number of times a tree has been transplanted shall be certified.

All plants will be inspected by the Employer's Representative at time of planting for variety and size, but approval from this inspection will not preclude rejection of plant material for defects which may appear later during the progress of the works.

2.7 Identification

One plant of each group, bundle or batch of plants will bear a permanent label of metal or other indestructible material, securely attached, having the full botanical name thereon.

2.8 Plant/Tree Substitution

Upon submission of substantial evidence that certain plant materials are not available at the time of contract, the Contractor will be permitted to substitute other plants with the approval of the Employer's Representative with an adjustment of price if necessary, to that originally specified. Submit alternative stating price and difference from specified plants/trees.

2.9 Damage

All plants are to be adequately and carefully packed and protected to survive transport, by whatever means, to the site, without damage in loading, transit or unloading. If, in spite of these precautions, roots, branches or shoots suffer slight damage they are to be carefully pruned. If major damage has occurred the plants will be rejected and replaced at the Contractor's own expense.

2.10 Heeling In

Non-Applicable

2.11 Planting Generally

All planting to be carried out during planting season October - March; unless otherwise detailed by the project programme.

2.12 Herbicides

Glyphosate - 'Roundup' by Monsanto Chemicals Ltd. Do not apply when rain is forecast within six hours. Do not apply when wind is likely to cause spray drift (over 24 kph/15 mph). Allow leaf symptoms to develop before carrying out any cultivations.

Basta - by Hoechst Ltd. Do not spray when wind is likely to cause drift (over 24 kph/15 mph). Protect all foliage of transplants or shrubs.

Propyzamide - 'Kerb 50W'. Apply between 1st October and 20th December only, when ground is damp. Ensure complete cover of the ground.

Pistol - Contains: 250g/L glyphosate & 40g/L diflufenican. Apply Pistol post-emergence of weeds at any time from March until the end of October, provided that the weeds are actively growing. Annual broad-leaved weeds should have at least two fully exposed leaves, and annual grasses should be at the one leaf growth stage or beyond. Some perennial weeds, including Docks, Perennial Sow Thistle and Willowherb are best treated just before flowering or the setting of seed.

The Contractor may use alternative formulations of the above herbicides, by other manufacturers, with the prior approval of the Employer's Representative. Such alternative formulations shall be applied to give the same degree of control as the application provided for in the Schedules of Quantity.

2.13 Weedkiller Application

All weedkiller shall be applied to manufacturer's recommendations with properly designed equipment, maintained in good working order and calibrated to deliver the specified volume, evenly and without local over-dosing.

The Contractor may, with the Employer's Representative's prior agreement, apply foliar acting weedkillers with an ultralow-volume applicator. The rate of application shall be such as to achieve the same control as the general rate specified. Such application shall not be used post-planting, nor with fosamine ammonium.

2.14 Fertilisers – General Fertiliser

Fertiliser to be agreed with Employer's Representative in advance of fertilizing operations.

Apply evenly over all planted areas at manufacturer's specified rate g/sq m prior to the application of mulch.

Soil Conditioner/Ameliorant

Manure: Spread well-rotted horse or farmyard manure or farmyard dung over all planted areas @ 1cubic metre per 10 Sq.m. prior to cultivation. (Poultry or pig manure will not be permitted on this site.)

2.15 Cultivation to Shrub Beds

The Contractor shall cultivate planting areas to break up the imported soil to a depth of 300-400 mm by the use of suitable machinery or by hand as necessary. After cultivation the areas is to be graded, stone picked and all stones, debris and the like in excess of 25mm in any dimension shall be removed from site. Spread the following over the planted area:

Manure: 25mm depth

General Fertiliser: To manufacturer's instructions

2.16 Planting rootballed Semi-mature trees:

Excavate pit to dimensions as noted in above clause or to a diameter 400 mm greater than rootball/container. Stockpile topsoil for re-use. Remove excavated subsoil, weeds, roots, stones and rubbish over 50 mm diameter to tip, and make up with topsoil. Fork over the base of the pit to decompact thoroughly.

Supply and incorporate the following ameliorants evenly into the backfill beside the pit:-

Moist manure:	0.047cu.m
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Slow Release Fertilizer 'Osmo Pro 2' Apply to manufacturers recommendations

(Note: Osmo Pro 2 is available from White's Agri, Ballough, Lusk, Co. Dublin.

Place spring-ringed or container grown tree upright in centre of pit, and orientate to best effect. Partially backfill the pit, to hold rootball steady. Probe the rootball on the west side of the tree for the stake. Drive 2 no. 1950 x 100 mm diameter stakes to leave 650mm over the ground.

Backfill pit in layers 150 - 225 mm deep, to set rootball at same depth as in nursery, allowing 50 mm for settlement. Firm backfill.

Secure tree to cross bar (for double-staking) using rubber flat back block and rubber tie.

Unless the soil is already wet, water thoroughly before placing the last layer of soil and allow to drain.

2.17 Stakes for Trees.

Stakes: Softwood (preserved), peeled chestnut, larch or oak, free from projections and large or edge knots and with pointed lower end.

Nails: To BS 1202: Part 1, galvanized, minimum 25 mm long and with 10 mm diameter heads.

The stakes shall be set vertically into the ground, and shall be set on the windward side of the tree as agreed with the Employer's Representative. Drive stakes before planting with a drive-all, wooden maul or cast iron headed maul, not with a sledge hammer. Refer to landscape drawings enclosed.

2.18 Tree Ties

Ties are to be approved by the Employer's Representative prior to their use. Tree ties shall be of rubber, PVC or proprietary fabric laminate composition, and shall be strong and durable enough to hold the tree securely in all weather conditions for a period of three years. They shall be flexible enough to allow proper tightening of the tie.

Ties shall be min. 45 mm wide. They shall be fitted with a simple collar spacer to prevent chafing, and with a buckle for adjustment. Nail each tie to the stake with one galvanized nail immediately behind the buckle, leaving the tie end free for adjustment. Non-adjustable, buck-less types will not be permitted.

2.19 Tip Pruning

Include for tip pruning of all standard trees. Pruning will be undertaken to reduce the crown volume, while retaining a proportion of live buds on each branch. The extent of pruning for each species will be instructed on site. Leading shoots shall not be pruned.

2.20 Shrub & Herbaceous Planting

Remove pots, wrappings or containers. Excavate for rootball. Insert plant into ground with minimum disturbance of its roots so that the soil level of the pot matches the surrounding soil level. Do not cover or damage dormant resting buds or shoots.

2.21 Cutting Back

Plants scheduled for cutting back shall be cut back after inspection. They may be cut back before or after planting. Cut back to approx. 200 mm above ground level, making a sloping cut slightly above a live bud. Cuts shall be made with a sharp pruning knife.

2.22 Watering

All root balled and pot grown plants shall be well soaked before planting. All planting shall be watered after planting, to consolidate soil around the roots, unless ground is so wet as to make additional water unnecessary.

2.23 Replacements

The planting will be inspected in Spring and again in the September following planting. Any tree or shrub found to have died from any cause except as provided below or the work of other contractors

shall be replaced by the Contractor at his own expense. Replacement planting shall conform in all respects with this Specification, including all specified excavation, provision and incorporation of all fertilizers and ameliorants, and weedkiller treatments.

Failures will not be charged to the Contractor in the following cases:

- Damage by hares or rabbits, where not protected by fencing or shelters.
- Damage by livestock, where not protected by fencing.
- Failure solely due to prolonged dry weather, except where the Contractor will be responsible for watering.
- Losses due to theft, vandalism or disturbance by other contractors.

Persistence of weed in planted areas will be regarded as a contributory cause of failure due to drought. Prolonged dry weather will not exonerate the Contractor if the scheduled aftercare operations have not been carried out as programmed.

2.24 Setting Out

Setting out shall be from figured dimensions where indicated, and otherwise by scaling. All planting areas shall be set out and agreed with the Employer's Representative prior to any planting.

Shrubs and ground covers planted in mass shall be at the spacing indicated on the drawings. Shrubs shall not generally be planted closer to a kerb or to the edge of a planting area than a distance equal to half the spacing indicated for that species.

2.25 Workmanship

A high quality of finish will be expected at all times.

Shrubs and Mixed Transplants/Shrubs: Leave surface reasonably even, free of all stones and debris over 50 mm diameter, free of weeds.

Shrubs and Ground Covers: Rake off surface, to leave even, free of all stones over 30 mm diameter, and free of weeds, before mulching.

2.26 Mulching & Hand-edging

The contractor shall allow for edging around all existing trees; i.e. by providing a clean edge with a hand edger to a depth of 100mm. All excess topsoil derived from the edging process to be removed from site. Allow for topping up of all 'edged' areas (i.e. 500mm radius around trunk of tree) with medium grade bark mulch to a depth of 50mm.

Allow for mulching on all formal shrub planting and hedging areas, as well as a 1.0m diameter circle around all existing and proposed trees; to a depth of 50mm.

Contractor shall allow for edging around all existing light posts, site structures (should as mini-pillars, postboxes) within the context of the contract area. Mulching in accordance with the above shall also be carried out.

2.27 Grass Seeding

GENERAL INFORMATION/REQUIREMENTS

2.28 Seeded Areas

Growth and development: Healthy, vigorous grass sward, free from the visible effects of pests, weeds and disease.

Appearance: A close knit, continuous ground cover of even density, height and colour.

2.29 Topsoil

Allow for topping up to allow for an even grass sward to be prepared post contract works.

2.30 Climatic Conditions

Carry out the work while soil and weather conditions are suitable. Grass seeding to be carried out during the first available opportunity, depending on weather conditions.

2.31 Machines and Tools

Use only machinery and tools suitable for the site conditions and the work to be carried out. Use hand tools around trees, plants and in confined spaces where it is impracticable to use machinery.

2.32 Watering Generally

Ensure the full depth of topsoil is thoroughly wetted.

Use a fine sprinkler or oscillating spray.

Frequency: As necessary to ensure the establishment and continued thriving of seeding.

2.33 Water Restrictions

If water supply is or is likely to be restricted by emergency legislation do not carry out seeding until instructed. If seeding has been carried out, obtain instructions on watering.

2.34 Setting Out

Clearly mark boundaries of seeding areas and obtain approval before starting work.

2.35 Preparation Materials Generally

Do not use materials containing concentrations of toxins, pathogens or other extraneous substances harmful to plant, animal or human life.

Submit to the Employer the seed supplier's certificate for the following materials and obtain approval before ordering or using the materials:

Source of supply

Analysis of content

Confirmation of suitability for proposed purpose

Confirmation of absence of harmful substances.

2.36 Herbicide

Weeds shall receive a herbicide suitable for suppressing perennial weeds. During the fallow period before cultivations.

2.37 Cultivation

Break up any compacted topsoil to full depth.

Reduce top 100 mm of all topsoil to a tilth suitable for blade grading (10 mm down particles).

Remove undesirable material brought to the surface including stones and clay balls larger than 50 mm in any dimension, roots, tufts of grass and foreign matter.

2.38 Grading

When topsoil is reasonably dry and workable grade to smooth, flowing contours, with falls for adequate drainage, removing all minor hollows and ridges.

Unless otherwise stated, finished levels after settlement to be 25 mm above adjoining paving, kerbs, manholes etc.

Soil levels may be adjusted by blade grading ensuring that there is nowhere less than 150 mm of topsoil. If the required levels cannot be achieved by movement of the existing soil, obtain instructions.

2.39 Fertilizer

Fertilise grass during seeding with Contractor's choice of fertilizer. Fertiliser to be applied to manufacturer's instructions.

2.40 Final Cultivation

After grading carry out further cultivation to reduce top 25 mm to a fine firm seed bed with good crumb structure.

Rake with chain harrow, drag mat or hand rake to a true, even surface, lightly firmed but not over compacted, removing all stones and earth clods more than 50 mm in any dimension on general areas.

Extend cultivation into any adjacent existing grass areas to ensure full marrying in of levels.

Obtain approval of appearance of prepared soil areas before seeding.

2.41 Quality of Seed

Purchase fresh seed for each growing season. Do not use seed purchased for previous seasons.

Use blue label certified seed varieties complying with EC regulations for purity and germination and also complying with the Ministry of Agriculture Fisheries and Food Higher Voluntary Standard.

Samples of mixture: supply when requested

2.42 Sowing

Sow seed in calm weather during early autumn in accordance with B.S. 4428

Spread seed evenly at the specified rate(s) applied in two equal sowings in transverse directions.

Lightly harrow or rake.

On light soils roll and cross roll after seeding using a lightweight roller.

2.43 Seeding for general grass amenity areas:

Mixture: 40% Perennial Ryegrass

40% Creeping Red Fescue

20% Chewings Fescue

Supplier and reference: n/a

Rate of application: Seed @ 35g/Sq.m.

Increase rate of application by 50% for slopes exceeding 1 in 3

2.44 Edges to Seeded Areas

Locations: Planting beds and around newly planted trees.

Timing: After seeded areas are well established.

Arisings: Remove.

PROTECTING/WATERING/CUTTING

2.45 Watering

During establishment of grass areas ensure that sufficient water is applied using a fine sprinkler or oscillating spray to maintain healthy growth.

Planting sites: Form level, stepped or gently sloping areas as scheduled and/ or appropriate to planting water depths and container/ bag sizes and shapes.

2.46 First Cut of General Grass Areas

When grass is 100 mm high, remove debris, litter and all stones and earth clods larger than 25mm in any dimension, and when grass is reasonably dry, cut to approximately 25 mm high using appropriate machinery.

Arisings: to be collected and removed off site.

2.47 Cleanliness

Remove soil and arisings from hard surfaces and leave the works in a clean, tidy condition at Practical Completion and after any maintenance operations.

The logo consists of the letters 'D&' stacked above 'O'T' in a white, sans-serif font, set against a dark grey square background.

D&
O'T

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